FENECON

Product catalogue

fenecon

For a better future with 100% renewable energies

Content

FENECON energy solutions

Everyone can help shape the energy transition!

With a photovoltaic system, you produce cheap electricity that you can best use yourself. Store this cheap energy and use it exactly when you need it for all areas of life: household electricity, e-mobility[1], heat generation[2] and much more. The FENECON Home Storage[3] is your energy center for sector coupling[4] in private households. With its intelligent energy management and a flexible hybrid inverter, it controls an existing or new PV system, CHP (combined heat and power), heat pump, heating rods[5], charging stations or other controllable energy sources or consumers.
With an app for time-based electricity tariffs[6], your storage system ensures that you only draw electricity from the grid when it is available in abundance and therefore is cheap. If on the other hand, grid electricity is expensive, you supply yourself from the storage unit or directly from the roof with the energy you produce yourself.
Thanks to the integrated emergency power supply function[7] you continue to be supplied even in the event of a power failure and at the same time use the solar recharge. The OpenEMS based FENECON Energy Management System (FEMS) offers you almost unlimited possibilities to manage your self energy consumption. Implement energy control requests through applications. For example, the standard grid-serving charging[8] prevents the PV system from being derated by a forecast-based charging strategy and helps you to get the maximum yield from your PV system.
The FENECON Home accompanies you into the energy transition and adapts to any change in your living situation. Thanks to the regular software updates and the modular expansion options, you can flexibly adapt the available capacity to the consumption and always stay up to date.

Cheap and reliable energy for agriculture

Agricultural farms have always been suitable for large-scale PV systems. Using solar energy to power the entire farm, including milking machines, bottling plants and an increasing number of electric vehicles. When the subsidies for PV systems come to an end, many full feed-in systems will be converted into self-consumption systems with storage[1], thus saving the farmer money as he hardly has to buy any additional electricity.

The inverters supplied with the Commercial30 storage systems and the FEMS[2] energy management system ensure that feed-in limits and set rules are followed to and that the consumers are still supplied with energy. Of particular importance is the emergency power capability[3] up to 30 kW, so that operations can continue even in the event of a power failure and the welfare of the animals can be maintained.

The storage systems are modularly expandable and can thus grow with the operation.

Modern mobility & charging solutions for companies

Medium-sized companies are innovation pioneers. Their commitment to sustainability is not only shaped by their personal will to participate in the energy transition, but also by economic considerations. Energy transition also means establishing e-mobility and charging infrastructure[1]. With a suitable energy storage system, this can even be implemented cost-effectively in the long term.

For example start with 5 charging points for company, guest and employee e-vehicles, including a DC- charging point[2] for short appointments. With a FENECON Commercial with 100 kW and 140 kWh[3] in the outdoor cabinet[4], you simply place the storage unit right next to your parking space. You win all along the line with this system, because the storage unit is installed quickly and compared to the costs of a lengthy grid connection extension and the resulting higher grid fees, the system pays for itself after just a few years.

And if you install a PV-system on your roof or already have one available, you can significantly increase your own consumption with the storage unit. This also saves you money. If you also integrate a FEMS[5] app for time-variable charging[6] of the storage unit, the system ensures that the storage unit is always charged with the cheapest electricity, i.e. exactly when there is a lot of energy available in the grid. Via FEMS monitoring you can visualize all energy flows online for your employees and guests and set the rules for energy management themselves.

If you need to expand your charging park, this is also quickly done. Connect additional storage and charging stations, integrate them quickly and easily into your FEMS, and more vehicles will be charging at your charging infrastructure without having to expand the energy connection.

FENECON energy storage systems

FENECON

Home storage systems

→ Perfect for new and existing PV systems as well as e-mobility and heat integration

→ Hybrid: DC connection for PV system with 2 x MPPT

→ 5 - 10 kW | 5.1 - 66.2 kWh

→ Incl. energy measurement

Further information can be found from page 5 onwards and at:

https://fenecon.de/en/home/

https://fenecon.de/en/pro-hybrid-10/

https://fenecon.de/en/pro-hybrid-gw/

https://fenecon.de/en/pro-ac-gw/

FENECON

Commercial storage systems

→ Perfect for agriculture, commercial & industrial and charging station combinations

→Integrated energy storage system FENECON Commercial storage systems (battery, battery inverter, EMS)

→ 0 kW / 31.5 kWh (emergency power capable), 50kW/70kWh

→ Modularly expandable up to 528 kW and 1.400 kWh

Further information can be found from page 8 onwards and at:

https://fenecon.de/en/commercial-30/

https://fenecon.de/en/commercial-50/

FENECON

Industrial storage systems

→ Large-scale storage solutions for industry, charging infrastructure and grid operation

→Integrated energy storage system (battery, battery inverter, EMS)

→ 88 kW / 82 kWh bzw. 92 kW / 82 kWh, modularly expandable up to multi MW/MWh

→ Individual guarantees

Further information can be found on page 10 and at:

https://fenecon.de/en/industrial/

FENECON energy storage systems consist of the battery, the hybrid/battery inverter and the energy management system.

The systems are based on OpenEMS as an open-source energy management system. Hardware and basic functions for this are included, further functions and offers from energy suppliers can be added as apps at any time.

FENECON home storage systems

Home

3-phase DC, AC & Hybrid energy Storage System

Outdoor capable (IP55), stacable, one-person installation, plug & play, digital putting into service, OEM manufacturer, emergency power capable, sector coupling immediately usable

→ FENECON Home hybrid inverter 10 kW
- o 2 PV inputs for up to 13 kWp
- o Up to 10 kW battery performance
- o Integrated grid disconnection point & emergency power function with solar recharging
- o 3-phase sensor for adjustment to the grid connection point with transformers for max. 120A
- o Integrated DC overvoltage protection type 2

→ FENECON Home High Voltage Battery
- o Loading and discharging performance: up to 10 kW
- o Nominal capacity: up to 69,9 kWh
- o Usable capacity: up to 66,0 kWh
- o Integrated BMS box with voltage and temperature monitoring at cell level
- o With Integrated FENECON Energy Management System (FEMS)
- o 3 relays for sector coupling installed as standard (can be loaded up to 10 A)

→ Matched cable set with connectors

→ Incl. FEMS app grid-suitable loading
- o for the reduction of PV regulation by a forecast based loading strategy

→ Incl. FENECON warranty
- o 5 years product warranty
- o 10 years capacity warranty

Accessories & Options

10	10 years product warranty 1 tower DIE122	→ Extension of the product warranty from 5 to 10 years → The same warranty conditions apply as when the system was purchased → Available within 12 months after delivery by FENECON
10	10 years product warranty 2 towers DIE123	→ Extension of the product warranty from 5 to 10 years → The same warranty conditions apply as when the system was purchased → Available within 12 months after delivery by FENECON
10	10 years product warranty 3 towers DIE124	→ Extension of the product warranty from 5 to 10 years → The same warranty conditions apply as when the system was purchased → Available within 12 months after delivery by FENECON

Pro AC-GW

3-phase AC power storage

→ Inverter: GoodWe BT with 5 - 10 kW max. battery power with 5 years product warranty
→ Battery: BYD Premium HVS: 5.1 - 12.8 kWh net capacity with 10-year product and capacity warranty.
→ Integrated grid disconnection point & emergency power function
→ 3-phase sensor EzMeter for adjustment to the grid connection point
→ FEMS connection box incl. FEMS energy management incl. 5-year product warranty
→ Cable set
→ An additional sensor is required for correct display of the AC source

Accessories & Options

10-year product warranty Pro AC-GW
DIE003

→ Extension of the product warranty from 5 to 10 years
→ The same warranty conditions apply as when the system was purchased
→ Available within 12 months after delivery by FENECON

Pro Hybrid-GW

3-phase DC power storage system

→ Inverter: GoodWe ET 5 - 10 kW:
2 PV inputs for 6.5 - 13 kWp and 5 - 10 kW battery power with 5-year product warranty
→ Battery: BYD Premium HVS: 5.1 - 12.8 kWh net capacity with 10-year product and capacity warranty.
→ Integrated grid disconnection point & emergency power function with solar recharging
→ 3-phase sensor EzMeter for adjustment to the grid connection point
→ FEMS connection box incl. FEMS energy management incl. 5-year product warranty
→ Cable set
→ Can optionally be used as a hybrid system (an additional sensor is required for correct display of the AC source)

Accessories & Options

10 year product warranty Pro Hybrid GW
DIE002

→ Extension of the product warranty from 5 to 10 years
→ The same warranty conditions apply as when the system was purchased
→ Available within 12 months after delivery by FENECON

Pro Hybrid 10

3-phasiges DC-Stromspeichersystem

→ Inverter: KACO blueplanet hybrid:
2 x 6.0 kW PV input and up to 9.9 kW battery power
→ Battery: BYD Premium HVS: 5.1 - 30.6 kWh
or HVM: 8.3 - 66 kWh net capacity
→ Hy-switch as graids disconnector (emergency power code optional) and power measurement
→ FEMS connection box incl. FEMS energy management
→ Cable set
→ Incl. FENECON warranty

Accessories & Options

Emergency power function KACO blueplanet hybrid
ZUB401

→ Activation code for emergency power function
→ Can be activated at the time of purchase or at a later date
→ Emergency power function requires hy-switch

10 year product warranty Pro Hybrid 10
DIE001

→ Extension of the product warranty from 5 to 10 years
→ The same warranty conditions apply as when the system was purchased
→ Available within 12 months after delivery by FENECON

DC power supply for system start of the Pro Hybrid 10 without PV
ZUB402

→ DC power supply for system start of the Pro Hybrid 10 without PV

Alternating current measuring transformer 100 A
ZUB500

→ Package with 3 pieces
→ For power measurement Pro Hybrid >50A

FENECON Commercial storage systems

Commercial 30

Agricultural and commercial storage system AC

→ Inverter: 30 - 90 kW power
→ Battery: 31.5 - 59.5 kWh net capacity
→ 3-phase power output 400V
→ Emergency power capable (requires additional hardware and software)
→ Incl. FEMS industrial energy management
→ 3-phase sensor without transformer incl. for the grid connection point
→ Incl. FENECON warranty
→ An additional sensor is required for the correct display of the AC
→ Picture shows COS000 (Commercial 30 kW with 35 kWh)

Accessories & Options

Plexiglas cover for 35 kWh
ZUB000

→ 3mm plexiglass cover for indoor Commercial 30 battery rack
→ Incl. spacers and screws

Plexiglas cover for 24,5 kWh
ZUB010

→ 3mm plexiglass cover for indoor Commercial 30 battery rack
→ Incl. spacers and screws

Commercial 30 grid disconnection point 100 A incl. emergency power function
ZUB001

→ Grid disconnection point for automatic or manual emergency power operation Commercial 30
→ Up to 100 A through current to inverter and emergency power supplied loads
→ Consumers with max. 30 kW total power can be supplied with emergency power by a 30 kW inverter
→ All-pole disconnection with star point formation
→ Adjustable emergency power reserve in the FEMS
→ Replaces FEMS - connection box Commercial

Outdoor housing for commercial battery (70 kWh)
ZUB002

→ Alternative to indoor housing (additional price)
→ Up to 20 battery modules = max. 70 kWh
→ Incl. air conditioning: 2 x 0.6 kW
→ Incl. lighting and door sensors
→ Hot-dip galvanised sheet steel, thermally insulated

10 year product warranty Commercial 30
DIE004

→ Extension of the product warranty from 5 to 10 years
→ The same warranty conditions apply as when the system was purchased
→ Available within 12 months after delivery by FENECON

Commercial 50

Commercial storage system AC

→ Inverter: 50 - 250 kW power
→ Battery: 70 - 1,400 kWh net capacity
→ Medium voltage certification
→ 3-phase current output 400V
→ Incl. FEMS industrial energy management
→ 3-phase sensor without transformer incl. for the grid connection point
→ Inkl. FENECON warranty
→ An additional sensor is required for the correct display of the AC
→ Incl. FENECON warranty
→ Picture shows COK000 (Commercial 50 kW with 70 kWh - indoor)

Accessories & Options

Plexiglas cover for 70 kWh
ZUB100

→ 3 mm plexiglass cover for Indoor Commercial-50 battery
→ Rack Incl. spacers and screws

10 year product warranty Commercial 50
DIE005

→ Extension of the product warranty from 5 to 10 years
→ The same warranty conditions apply as when the system was purchased
→ Available within 12 months after delivery by FENECON

FENECON Industrial storage systems

Industrial REFU-BMW

Large storage system in 10' container design

→ Integrated energy storage container
→ Industrial and grid storage
→ Can be used in primary control power
→ Modular in performance and capacity (1C)
→ Also available in configurations for 0.5C, 0.33 or 0.25C
→ Cascading of REFUstore inverter and BMW i3 batteries
→ Max. Rated power: 88 - 704 kVA
→ Max. Capacity: 82 - 656 kWh (at 400 V griads voltage)
→ Incl. FENECON warranty

Industrial KACO-BMW

Large storage system in 10' container design

→ Integrated energy storage container
→ Industrial and grid storage
→ Can be used in primary control power
→ Modular in performance and capacity (1C)
→ Also available in configurations for 0.5C, 0.33 or 0.25C
→ Cascading of KACO inverters and BMW i3 batteries
→ Max. rated power: 92 - 552 kVA
→ Max. capacity: 82 - 656 kWh
→ Incl. FENECON warranty

Accessories & Options

Fire alarmsystem ZUB201	→ Fire alarm system incl. smoke aspiration system, flashing and horn → For 10' Container
Battery climate control ZUB202	→ Battery air conditioning with liquid cooling → 16 kW cooling capacity for max. 12 batteries
Battery climate control extension ZUB204	→ Battery air conditioning with liquid cooling → 16 kW cooling capacity from 13 to max. 16 batteries

The product range of the FENECON Industrial storage systems as well as the FENECON customized solutions are especially aimed at EPCs, charging infrastructure installers, energy providers, solar engineers and participants in tenders. All solutions consist of lithium batteries, a bidirectional battery inverter and the FENECON FEMS energy management system including the applications relevant for the business model. Warranty and (full) maintenance contracts are offered on a project-specific basis. We also supply system integrators with batteries or power electronics and advise on OpenEMS-based energy management solutions. In the customized area, FENECON has realized successful projects with batteries from electric cars and is happy to offer electric vehicle OEMs appropriate solutions. We also have extensive experience in grid storage for peak shaving, phase balancing and power quality enhancement. We are happy to support resellers, energy suppliers and project customers in project development on the basis of our extensive project experience and calculation and design tools. We meintain a network of strong partners whom we are happy to recommend for competencies beyond our scope of services.

FEMS

FENECON

Energie Management System

Based on OpenEMS

On the initiative of FENECON, the energy and storage industry took a big step on 15.11.2018: The "OpenEMS Association" was jointly founded in Deggendorf as a registered association by many large energy suppliers, grid operators, storage manufacturers and software companies. The association coordinates the further development of OpenEMS as an "operating system for the energy transition". In this way, the energy industry is following a path that has been successfully exemplified by the mobile phone industry with smartphones and many other industries. FENECON is clearly committed to the use and further development of OpenEMS as an open source system in order to provide the users of our products with the greatest possible variety of functions and uses. The scope of delivery of all integrated FENECON storage systems already includes the apps for online monitoring, if necessary emergency power precaution and self-consumption optimization. In addition, further apps can be easily retrofitted or implemented on a project-specific basis. For more information, visit:

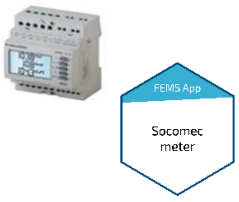
https://fenecon.de/en/fems/ and http://www.openems.io

Hardware

FEMS Relay 8-Channel TCP
FEM010

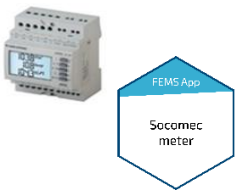
→ Low-cost variant for the control of 8 digital or relay relays outputs
→ Standard rail mounting
→ incl. 24 V top-hat rail power supply unit
→ Switching capacity: 12 VDC/15 A, 24 VDC/15 A, 125 VAC/15 A, 250VAC/10 A
→ Can be used either as normally closed or normally open contact
→ Control via grid

Monitoring



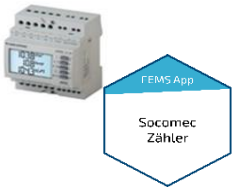
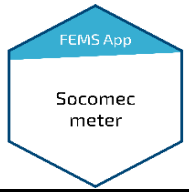
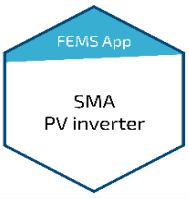
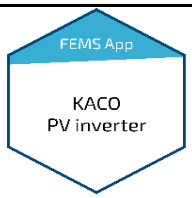
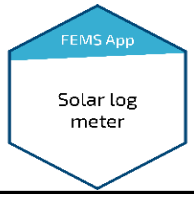
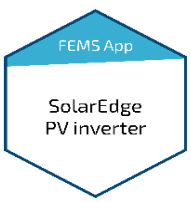
FEMS package 3-phase sensor 80A incl. Adapter
FEM110

→ Active energy meter 3-phase 3 x 80 A
→ Incl. 10 m data cable to the FEMS
→ Optional for the detection of the first additional generation unit in the FEMS monitoring for Pro Hybrid 10
→ incl. FEMS App SOCOMEC meter

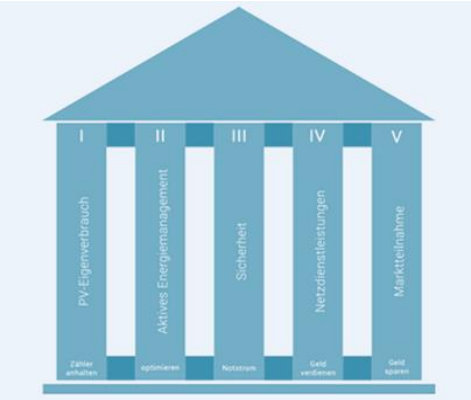


FEMS package 3-phase sensor 80A
FEM111

→ Active energy meter 3-phase 3 x 80 A
→ Incl. 10m data cable to the FEMS
→ Optional for the recording of generators and consumers in FEMS monitoring
→ incl. FEMS App SOCOMEC meter

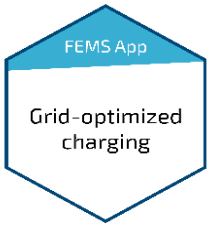
	FEMS package 3-phase sensor current without transformer FEM112	→ Active energy meter, 3-phase voltage measurement → Current transformer for current measurement optional → Inkl. 10 m data cable to the FEMS → Optional for the acquisition of generators and consumers over 80 A → Inkl. FEMS app SOCOMEC meter
	FEMS App SOCOMEC meter FEM113	→ Direct reading of a SOCOMEC meter by FEMS → Released meters are listed on the following website https://fenecon.de/en/fems-2-2/fems-app-socomec-zaehler-2/
	FEMS App SMA PV- inverter FEM114	→ Direct readout of an SMA PV inverter by FEMS → Approved inverters are listed on the following website https://fenecon.de/en/fems-2-2/fems-app-sma-pv-wechselrichter/
	FEMS App KACO PV-inverter FEM115	→ Direct readout of an KACO PV-inverter by FEMS → Approved inverters are listed on the following website https://fenecon.de/en/fems-2-2/fems-app-kaco-pv-wechselrichter/
	FEMS App Solar-log generation Meter FEM116	→ Direct readout of a Solar-Log by FEMS for monitoring of the Production values
	FEMS App Janitza meter FEM117	→ Direct readout of a Janitza meter by FEMS → Released meters are listed on the following website https://fenecon.de/en/fems-2-2/fems-app-janitza-zaehler-2/
	FEMS App CARLO GAVAZZI meter FEM118	→ Direct reading of a CARLO GAVAZZI meter by FEMS → Released meters are listed on the following website https://fenecon.de/en/fems-2-2/fems-app-carlo-gavazzi-zaehler-2/
	FEMS App Discovergy Smart meter FEM119	→ Measurement of generation, grid purchase and grid feed-in → Processing of data in FEMS through cloud interface → Further information under https://fenecon.de/en/fems-2-2/fems-app-discovergy-smart-meter/
	FEMS App SolarEdge PV Inverter FEM120	→ Direct reading of a SolarEdge PV inverter by FEMS → Approved inverters are listed on the following website https://fenecon.de/en/fems/

5-pillar model for storage efficiency & 100% energy transition



The "5-pillar model" describes the categories in which electricity storage systems are used. The FENECON Energy Management System is perfectly prepared for these so-called "multi-use" scenarios, in which (I) PV self consumption, (II) active energy management, (III) security through emergency power, (IV) grid services and (V) market participation are combined.

Pillar 1: PV self-consumption



FEMS App
Grid-serving loading
FEM210

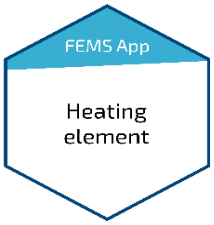
→ Control algorithm to avoid the regulation of the midday peak of PV systems by means of free battery capacity
→ Consideration of the current weather conditions
→ Adaptation to the duration of sunshine
→ Automatically includes the free battery capacity

Pillar 2: Active energy management

2.1 Heater rod

Heater
6 kW
FEM011

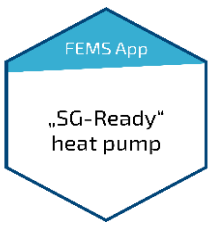
→ Electric heater 6 kW with thermostat
→ 1½ inch; 520 mm installation depth



FEMS App
Heater
FEM211

→ Control algorithm for controlling the heating rod in four power levels (0 kW, 2 kW, 4 kW, 6 kW)

2.2 Heat pump

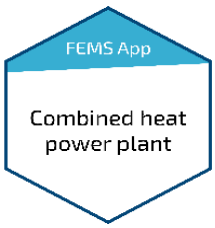


FEMS App
"SG- Ready"
heat pump
FEM212

→ Control algorithm for the control of a "Smart-Grid-Ready Heat pump

https://fenecon.de/en/fems-2-2/fems-app-sg-ready-waermepumpe-2/

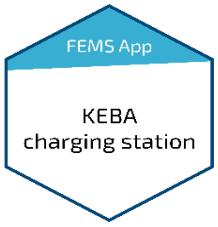
2.3 Combined heat and power unit



FEMS App
Combined heat and power plant
FEM213

→ Control algorithm for the connection of a combined heat and power plant to the electrical energy management
https://fenecon.de/en/fems-2-2/fems-app-blockheizkraftwerk-bhkw/

2.4 AC charging stations



FEMS App
KEBA Charging station
FEM380

→ FEMS control algorithm for controlling the charging station
→ Charging the electric car with surplus electricity
→ Dynamic adjustment of the charging current to current generation and consumption
→ Manual control of the charging pole as well as evaluation of power and energy data via the FEMS user interface
https://fenecon.de/en/fems-2-2/fems-app-keba-ladestation/

Type 2 charging station KEBA 11/22 kW 4m/socket
FEM381
FEM382
FEM383

→ KEBA KeContact P30 c-series charging station
→ 11 kW or 22 kW with integrated 4 metre connection cable and type 2 plug or
→ 22 kW with type 2 socket, for connecting your own cable
→ For wall mounting
→ Without energy management
→ Further variants on request

KEBA stand
FEM384

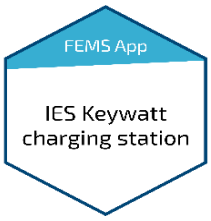
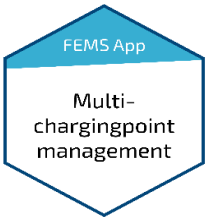
→High-quality stainless steel stand for KEBA KeContact P30 c-series
→Foundation necessary

KEBA Triangular stand
FEM385

→High-quality stainless steel stand for two KEBA KeContact P30 c-series charging stations
→Foundation necessary

FEMS App
eCharge Hardy Barth Charging Station
FEM390

→ FEMS control algorithm for controlling the charging station
→ Charging the electric car with surplus electricity
→ Dynamic adjustment of the charging current to current generation and consumption
→ Manual control of the charging pole as well as evaluation of power and energy data via the FEMS user interface
https://fenecon.de/en/fems-2-2/fems-app-ies-keywatt-ladestation-2/

	Type 2 charging station eCharge Hardy Barth 11 kW 4m spiral cable FEM391	→ eCharge Hardy Barth cPµ1 µT11 charging station → 11 kW, integrated 4 meter spiral cable with type 2 plug (IEC 62196-2) → DC residual current detection 6mA integrated → Wall mounting → MID meter for power measurement and visualization included in the scope of delivery → Without energy management
	Type 2 charging station eCharge Hardy Barth 2x11 kW 2x4m spiral cable FEM392	→ eCharge Hardy Barth cPH1 2T22 charging station → 2x 11 kW, 2x integrated 4 meter spiral cable with type-2 plug (IEC 62196-2) → Circuit breaker C32A 3p, DC residual current detection 6mA integrated → Power / energy recording per charging point → Only type A earth leakage circuit breaker to be installed by customer → Wall mounting → Without energy management
2.5 DC charging stations		
	FEMS App IES Keywatt charging station FEM300	→ FEMS control algorithm for controlling the charging station → Charging the electric car with surplus electricity → Dynamic adjustment of the charging current to current generation and consumption → Manual control of the charging pole as well as evaluation of power and energy data via the FEMS user interface
	IES Keywatt charging estation CCS, 24 kW FEM301	→ DC Wallbox 24 KW, 1 x CCS → Charging power independent of the charger installed in the vehicle → Charging cable with CCS connection and cable holder → Also available with CHAdeMO connection → Without energy management
2.6 Multi-charge point management		
	FEMS App Multi- charge point management (per additional charging station) FEM310	→ Self-consumption optimization for multiple charging points → Avoidance of load peaks at the grid connection point by dynamically limiting the charging powers → Consideration of the power that can be provided by the storage system https://fenecon.de/en/fems-2-2/fems-app-multiladepunkt-eigenverbrauch-2/
2.7 Peak load capping		
	FEMS App Peak shaving FEM410	→ Control algorithm for capping load peaks on the grid connection point → Reactive power provision according to cos-phi specification https://fenecon.de/en/fems-2-2/fems-app-lastspitzenkappung-2/

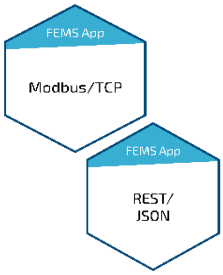
	FEMS App Phase-precise peak shaving FEM411	→ Control algorithm for peak shaving, which prevents neither the total power nor the phase powers from exceeding limit values https://fenecon.de/en/fems-2-2/fems-app-phasengenaue-lastspitzenkappung/
	FEMS App Time-slot peak shaving FEM412	→ Control algorithm for peak shaving at the grid connection point according to the grid operator's high-load time window. → Reactive power provision according to cos-phi specification https://fenecon.de/en/fems-2-2/fems-app-hochlastzeitfenster/
	2.7 Other load control	
	FEMS App Manual relay control FEM510	→ Manual switching of a channel of the relay board via the online monitoring incl. confirmation message https://fenecon.de/en/fems-2-2/fems-app-manuelle-relaissteuerung/
	FEMS App Threshold control FEM511	→ Control algorithm for switching one channel of the relay board depending on an adjustable threshold value of generation, feeding, drawing or state of charge https://fenecon.de/en/fems-2-2/fems-app-schwellwert-steuerung/

Pillar 3: Emergency power supply

In order to be able to use the storage system in the event of a power failure, our high-performance home storage systems of FENECON Home , Pro and FENECON Commercial 30 are emergency power-capable

Pillar 4: Network services

In the responsibility for grid stability, electricity storage systems can earn money and contribute to the 100% energy transition. The decisive factor is the performance of the systems, i.e. the charging and discharging capacity of the battery inverter. Feel free to contact us about the models available in your region / country

	FEMS App Write access Per, Commercial, Industrial FEM710 FEM711 FEM712	→ Possibility of controlling the storage system by a customer's own controller or the controller of a third party via ModBus TCP or REST Api

Pillar 5: Market participation

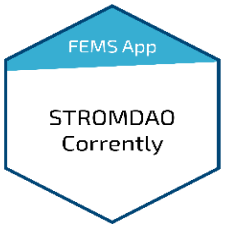
Smart participation in energy markets can take advantage of low or negative exchange electricity prices, as well as regional and peer-2-peer electricity marketing models. Surplus wind power is no longer destroyed, but ends up in the decentralised storage facilities of the participants. Electricity marketing in accordance with the EEG also takes place via this connection. We assume that in the future, all relevant utilities will offer their prosumer customers with storage systems attractive models that include storage usage. We have received numerous awards for our energy partner model, which makes storage facilities fit for these offers. Particularly attractive solutions on OpenEMS- basis we summarize in our "Pillar 5 Apps"

Optimization for flexible electricity tariffs

Charging or drawing from the grid when electricity prices on the exchange are low or negative. As a combination application for PV self-consumption, peak load capping and other basic applications. Suitable for all electricity providers with flexible tariffs

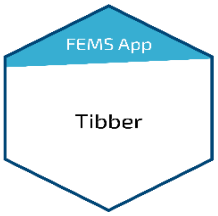
FEMS App Awattar HOURLY
FEM810

→Optimization for the electricity tariff with hourly price adjustment "Awattar HOURLY"
https://www.awattar.de/tariffs/hourly
https://fenecon.de/en/fems-2-2/fems-app-awattar-hourly-deutschland-2/



FEMS App STROMDAO Correntl
FEM811

→ Optimization for "Correntl - the electricity product that creates value" by STROMDAO
https://www.correntl.de/
https://fenecon.de/en/fems-2-2/fems-app-stromdao-corrently/



FEMS App Tibber
FEM812

→ Optimization for the electricity tariff with hourly price adjustment "Tibber"
https://fenecon.de/en/fems-2-2/fems-app-tibber/

Marketing & Service

Marketing & Sales Support

WiPo-Tool 3.4.5

→ PV production simulation
→ Real load curves or standard load profiles
→ Simulation on a 15 minute basis
→ Consideration of CHP, e-mobility, peak load capping, heat pumps, etc.

Storage system Dummies

→ FENECON Home dummy

Storage system roll-up	→ Roll-up FENECON storage system → Dimensions: 1,2x1x0,4 m (H|W|D)

Commissioning packages

Commissioning support and On-site training - Pro Commercial Industrial DIE006 DIE007 DIE008	→ Support during the commissioning of FENECON storage → Without installation or electrical connection → Carrying out the training and, if necessary, issuing a training certificate → Operating training for customer

Service fees

Engineering/ Project planning and training DIE009	→ Hour of use storage engineer → Plus travel expenses → Accommodation costs according to expenditure → Travel time rate: 50%
Serviceeinsatz DIE010	→ Hour of operation storage technician → Plus travel expenses → Accommodation costs according to expenditure → Travel time rate: 50
Travel costs Service DIE011	→ Flat rate per kilometer driven; plus travel time (50 % of the hourly rate)

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